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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/759,880	01/16/2004	Tung-Wu Lu	14185 B	8428
36672 7590 05/11/2007 CHARLES E. BAXLEY, ESQ. 90 JOHN STREET THIRD FLOOR NEW YORK, NY 10038			EXAMINER TORRES, JOSE	
			ART UNIT 2624	PAPER NUMBER
			MAIL DATE 05/11/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/759,880

Applicant(s)

LU, TUNG-WU

Examiner

Jose M. Torres

Art Unit

2624

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: ____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1, 2, 5 and 11 are rejected under 35 U.S.C. 102(e) as being anticipated by Nakao (US 6,755,861).

Re claim 1: Nakao disclose an auxiliary system (System shown in FIG. 4) for plastic surgery comprising: a three-dimensional (3D) geometric data capturing device (FIG. 4, "scanner 42") being a 3D geometry data capturing equipment based on stereophotogrammetric and 3D scanning techniques capable of acquiring and storing 3D geometric data of patient's body parts ("breast") to be operated (Col. 6 line 63 through Col. 7 line 12 and Col. 8 lines 6-6-34); a 3D display device (FIG. 4, "monitor 40") provided with a 3D display capability and capable of displaying the 3D geometric data acquired by the 3D geometric data capturing device with 3D effects Col. 6 line 63 through Col. 7 line 12); a database (FIG. 4, "memory 38") being a storage medium pre-stored with a vast-amount of data, including data and effect of previous operations that have been performed

in the past Col. 6 line 63 through Col. 7 line 28); an analysis device (FIG. 4, "computer 36") serving to process the 3D geometric data of the 3D geometric data capturing device and the data of the database, the analysis device additionally provided with an error-compensation device ("microprocessor controller"), based on equations of human tissue mechanics and laws of mechanics and gravity ("gravity switches of acceleration sensors"), the analysis device being able to work out data about human body's shape under gravity (User position) with or without implants, and then the data of the human body shape being transmitted to and shown on the 3D display device, the error-compensation device employed to correct errors of the predicted data of the human body shape based on patient's body constitution, tissue properties, surgeon's skill level and experiences of previous operations (The computer performs the necessary instructions to obtained the image of the breast which corresponds to the after surgery breast's size and shape, based on the control parameters as the stored size and shape, pre surgery image as the breast removal surgery, gravity among others. Col. 7 lines 13-52).

Re claim 2: Nakao disclose the error-compensation device of the analysis device is a statistics analysis device, the statistics analysis device performs experienced-based error-compensation based on data of single database (FIG. 4, "memory 38") or different databases and techniques of the equations of gravity

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("gravity switches") and patient body properties (User position.) of the analysis device (Col. 7 lines 13-52).

Re claim 5: Nakao disclose the 3D geometric data capturing device is 3D scanning equipment (FIG. 4, "scanner 42", Col. 6 line 63 through Col. 7 line 12).

Re claim 11: Nakao disclose the 3D display is computer display (FIG. 4, "monitor 40", Col. 6 line 63 through Col. 7 line 12).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 3 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakao in view of Sabol et al. (US 7,187,790). The teachings of Naka have been discussed above.

As to claims 3 and 4, Nakao does not explicitly disclose the error-compensation device is an artificial neural network that can be connected to different databases through a network, so as to perform experience analysis and corrections using different databases all over the world.

Sabol et al. teaches the error-compensation device is an artificial neural network (FIG. 15, "neural network system") that can be connected to different databases ("integrated knowledge base") through a network, so as to perform experience analysis and corrections using different databases all over the world (Col. 4 lines 46-49, Col. 5 line 53 through Col 6 line 46 and Col. 51 line 9 through Col. 52 line 3).

Therefore, in view of Sabol et al., it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Nakao's system by incorporating the neural network system, as taught by Sabol et al., as the error-compensation device performing the experienced-based compensation based on the control parameters such as the gravity, user position, and data being stored on different databases in order to facilitate the management of data available to care providers and distinguish different input data according to the learning experience of the neural network (Since the training of the neural network is based on the amount of training data, if it connected to various inputs (networks) the amount of training data increases, therefore the error decreases. Col. 5 lines 41-52 and Col. 51 line 58 through Col. 52 line 3).

5. Claims 6-10, 12 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakao in view of Echerer et al. (US 5,740,267). The teachings of Nakao have been discussed above.

As to claims 6-10, Nakao does not explicitly disclose the 3D geometric capturing device is stereophotogrammetric equipment, computerized tomography, X-ray photographic device, ultrasonic scanner, and magnetic resonance imaging equipment.

Echerer et al. teaches the 3D geometric capturing device is stereophotogrammetric equipment ("Multiple cameras"), computerized tomography ("CT"), X-ray photographic device ("x-ray"), ultrasonic scanner ("ultrasound"), magnetic resonance imaging equipment ("MRI", Col. 5 lines 12-24, 38-43 and 56-62).

Therefore, in view of Echerer et al., it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Nakao's system by incorporating the 3D capturing devices and the 3D display devices of Echerer et al. such as CT, digital x-ray, MRI, ultrasound among others in order to make the system available to different image formats for the purpose of diagnostic or decision making (Col. 5 lines 12-24).

As to claims 12 and 13, even though neither Nakao nor Echerer et al. explicitly disclose the 3D display device are a film-output device and/or a photo-output device. Official Notice is taken in view of the common knowledge of such devices to a person of ordinary skill in the art at the time the invention was made to use a film-output device or a photo-output device as the display means of the system in order to provide an output which supports the original format of the imaging source, such as x-ray and computed tomography, since the output of these imaging devices comprises film and photos respectively.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Rogers et al. disclose a Method for Combining Automated Detections from Medical Images with Observed Detections of a Human Interpreter, Schellhas et al. disclose a Three-Dimensional Computed Tomography in Maxillofacial Surgical Planning, and Cutting et al. disclose a Three-Dimensional Computer-Assisted Design of Craniofacial Surgical Procedures: Optimization and Interaction with Cephalometric and CT-Based Models.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jose M. Torres whose telephone number is 571-270-1356. The examiner can normally be reached on Monday thru Friday: 8:00am - 4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jingge Wu can be reached on 571-272-7429. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

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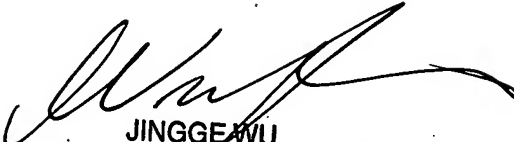
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USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JMT

05/08/2007



JINGGE WU
SUPERVISORY PATENT EXAMINER